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ABSTRACT

The Massachusetts Dissemination Project presents this compendium of energy-related educational resources as a reference guide for persons interested in exploring energy problems, conservation techniques, and alternate energy sources with their students. Provided are brief descriptions of available bibliographies, classroom materials, publications, media, newsletters, organizations, and funding sources. For example, the section on classroom materials and publications contains over 100 listings of curriculum products, posters, games, activity sheets, coloring books, and comic books. Included are prices, if known, and publisher's addresses. Entries are from throughout the United States, particularly the New England and Washington, D.C. areas. (Author/WB)

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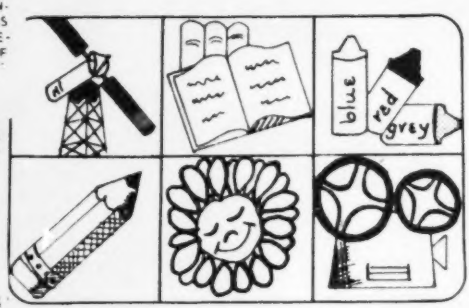

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FOCUS ON:

CLASSROOM ENERGY MATERIALS

SPRING 1980

SE 033 392

MASSACHUSETTS DISSEMINATION PROJECT

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Focus On: Classroom Energy Materials

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FOCUS ON: is a series of brief publications developed by the Massachusetts Dissemination Project. Like our *RESOURCES FOR SCHOOLS* booklets, *FOCUS ON:* presents timely information and resources directed toward a critical educational issue confronting Massachusetts educators. The compact size and limited number of copies printed allow the project to be more responsive and sensitive to the rapidly changing information needs of particular readers. Please share this issue with colleagues in your school, organization, or department. Additional copies may be obtained free, while supplies last, from the Massachusetts Dissemination Project, or your local regional education center listed on the back cover. Readers should feel free to reproduce the contents as needed. The project welcomes your comments about this booklet and your suggestions for future issues.

Another publication in this series:

- *Focus On: Energy Conservation Practices in Schools*

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INTRODUCTION

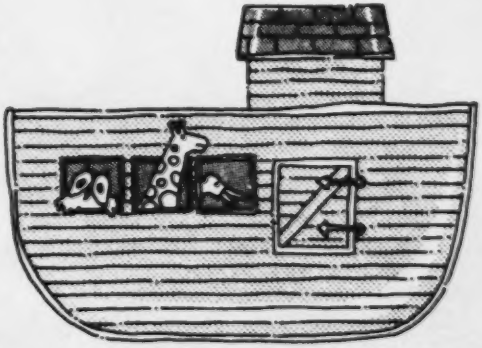
The Massachusetts Dissemination Project published this collection of energy-related educational resources as a reference guide for those interested in exploring current and future energy problems, conservation techniques, and alternative energy sources with their students. The following pages contain brief descriptions of available bibliographies, classroom materials, publications, media, newsletters, energy-related organizations, and sources of funding.

Most items mentioned are offered at low or no cost, and addresses have been included to speed ordering. Please note that descriptions and prices quoted are based on information provided at the time of writing--availability and cost may have since changed.

While not all inclusive, we hope readers become acquainted with some of the many organizations working in the field of energy education.

This listing resulted from a variety of contacts and referrals. The Dissemination Project thanks the many individuals and organizations who cooperated in this effort.

Mitzie Kocsis
Spring 1980



BIBLIOGRAPHIES

Just beginning to consider an energy education program??? Have a program but need new or additional materials??? The bibliographies listed below may get you started in the right direction.

* * * * * * * *

- Cooperative Extension Energy Office
  Station Service
  Tillson Farm
  Amherst, MA 01003
  Tel. (413) 545-2132

ENERGY RELATED PUBLICATIONS AVAILABLE FOR PUBLIC DISTRIBUTION (1979): Lists publications available in quantity through the Cooperative Extension Energy Office and other sources.

- The Hatheway Environmental Education Institute
  Massachusetts Audubon Society
  Lincoln, MA 01773
  Tel. (617) 259-9500

ENERGY: AN ANNOTATED BIBLIOGRAPHY OF SELECTED ENERGY MATERIALS: Includes books, brochures, games, audio-visuals and other items produced through 1977 along with the addresses from which to order. While the bibliography is no longer available for distribution, a reference copy is catalogued within the institute's library. The library is open to the public Tuesday through Friday (9:00 a.m. - 5:00 p.m.) and Saturday (10:00 a.m. - 4:00 p.m.).

- Illinois Office of Education
  School District Organization and Facilities Section
  100 North First Street
  Springfield, IL 62777

ENERGY EDUCATION RESOURCE MATERIALS: A collection of publications, curriculum materials, and audio-visuals which are available free of charge from a variety of sources. This listing also specifies appropriate grade levels and "where-to-order" information.

- National Solar Heating and Cooling Information Center
  P.O. Box 1607
  Rockville, MD 20850
  Tel. (800) 523-2929

SOLAR ENERGY READING LIST FOR CHILDREN (K-7)
SOLAR ENERGY READING LIST FOR YOUNG ADULTS (grades 6-12)
ENERGY EDUCATION MATERIALS (elementary and high school)
Thses solar bibliographies briefly describe selected materials, and provide appropriate grade level, cost, and how to order.

- Sundries
  1001 Connecticut Avenue, NW, 5th floor
  Washington, DC 20036
  Tel. (202) 466-6350

SOLAR ENERGY EDUCATION BIBLIOGRAPHY FOR ELEMENTARY, SECONDARY AND COLLEGE STUDENTS: A reference guide to solar publications and audio-visual materials selected for their adaptability to classrooms and workshops. The bibliography includes 1978-79 items along with distributors of energy and solar films, filmstrips, and slide shows.

CLASSROOM MATERIALS AND PUBLICATIONS

This section describes free and low cost items for use in classroom or community energy education. Included are curriculum products, posters, games, activity sheets, and coloring and comic books.

* * * * * * * *

- Alabama Department of Education
  Montgomery, AL 36104

  Contact: Donna Bentley

ENERGY A1 -- ENERGY EDUCATION UNIT: A set of four detailed manuals detailing a variety of energy education activities for science and social studies (grade 6), science (grade 8), and social studies (grade 9).

- American Association of School Administrators
  1801 North Moore Street
  Arlington, VA 22209

SCHOOL ENERGY CRISIS: PROBLEMS AND SOLUTIONS (1977): This report analyzes school energy problems, offers "how-to" advice, discusses plugging energy into the curriculum, and provides names and addresses of organizations and individuals offering assistance.

- American Gas Association
  Educational Services
  1515 Wilson Boulevard
  Arlington, VA 22209

TEACHING AIDS ABOUT GAS (1979-80): Describes kits, publications, energy reports, and filmstrips appropriate for students at the lower elementary through high school levels. Single copies of items listed are free to teachers.

- American Museum of Energy
  Oak Ridge Associated Universities
  P.O. Box 117
  Oak Ridge, TN 37830

SCIENCE ACTIVITIES IN ENERGY: A series of simple experiments for 4th, 5th, and 6th grades, but adaptable to other grade levels or community programs. Many activities involve art, economics, arithmetic, reading, and other disciplines. Each unit forms a coherent program of instruction on a single topic: wind energy, solar energy, electricity, conservation, or chemical energy.

- American Petroleum Institute
  Education Programs and Services
  Public Relations Department
  2101 L Street, NW
  Washington, DC 20037
  Tel. (202) 457-7040

FACTS ABOUT OIL: This forty-four page manual presents basic facts about the origins and uses of oil, drilling, refineries, research and petroleum related careers. Good for all levels. The lesson plan for teachers explaining how to use the manual, is oriented to sixth grade and up. FREE.

SUPPLEMENTARY ENERGY SOURCES: A thirty-two page pamphlet discusses energy sources which may help America solve its future needs: solar, wind, tidal power, coal, gas from coal, geothermal and nuclear energy. Includes a lesson plan for teachers of all levels. FREE

NEW FRONTIERS FOR ENERGY: EXPLORES THE WHY AND HOW OF UNDERSEA DRILLING: A lesson plan sheet is also available.

DISTILLATION: A wall chart with explanatory information.

NRG: An illustrated storybook about energy, for students in grades 2-6.

TEACHER RESOURCES FOR ENERGY ECONOMICS: Two listing are available. One is geared to the primary and intermediate levels, the other to grades 7-12. Specify your preference when ordering.

THAT AMAZING MAZE - A REFINERY: A four-page reprint from "Petroleum Today".

GLOSSARY: Two pages of petroleum terms.

LOOKING FOR ENERGY - A GUIDE TO INFORMATION RESOURCES

- Amoco Teaching Aids
  P.O. Box 1400 K
  Dayton, OH 45414

THE ENERGY CRISIS -- WHAT YOU CAN DO ABOUT IT: Teacher's instructions and five student activity sheets help students in grades 4-6 understand some of the causes and possible solutions to our energy problems. $1.00 each.

LIVING WITH ENERGY: Five student activity sheets for grades 7-10, and three pages of teacher's instructions provide a variety of activities to use in studying energy problems. $1.00 each.

THE MOCHANS: This booklet contains ten student activity sheets illustrating key economic concepts. Some of the areas reviewed are means of exchange, methods of production, scarcity of resources, and economic stability. It includes a ten-page teacher's guide with suggested lesson plans, various classroom activities, and optional pre- and post-tests for use in grades 7-12. $2.00.

AMOCO TEACHING AIDS: A five page folder listing free and low cost teaching aids available to help students understand basic economic concepts and energy-related needs, resources, and problems.

- Associated Media Products
  P.O. Box 5579
  Richmond, VA 23220
  Tel. (804) 358-0334

This company offers materials for use in classrooms, laboratories, or workshops with students kindergarten through college. Students can experiment with solar energy by designing solar toys, making their own solar vehicles, and developing new solar power systems.

- Atlantic Richfield Company
  515 South Flower Street
  Los Angeles, CA 90071

DRIVE FOR CONSERVATION: Describes driving and car maintenance techniques which help automobile drivers conserve energy. Might be interesting for a driver education course.

- Boston Edison Inc.
  Public Information Department
  800 Boylston Street
  Boston, MA 02199
  Tel. (617) 424-2000

ENERGY INFORMATION SERVICES CATALOGUE: Useful to many people, regardless of location as it lists resources available from many different sources. This electric utility company also offers curriculum aids and class speakers to schools in the Greater Boston area.

- Center for Renewable Resources
  1028 Connecticut Avenue, NW
  Washington, DC 20036

SOLAR ENERGY EDUCATION PACKET FOR ELEMENTARY AND SECONDARY STUDENTS (1979): This K-12 combined curriculum includes reading assignments, activities, and experiments. Special attractions include: Sun-Day ideas, sun songs, and wind energy information.

- City of Raleigh
  Department of Transportation and Planning
  110 South McDowell Street
  P.O. Box 540
  Raleigh, NC 27602

FREE POSTERS: One is entitled: "If Noah Hadn't Shared His Ride, Then Where Would We Be Today?"

- College of Our Lady of the Elms
  Chemistry Department
  Chicopee, MA 01013
  Tel. (413) 598-8351 ext. 25

  Contact: Maxyne Schneider, SSJ

  or

  Westfield State College
  Physical Science Department
  Westfield, MA 01085
  Tel. (413) 568-3311 ext. 371

  Contact: Peter Ball

ENERGY ENVIRONMENT SIMULATOR: A specially designed analog computer simulates energy resources, demands, and the environmental effects of energy choices. As a clock speeds time at the rate of a century a minute, participants decide about the allocation of energy resources by operating a remote panel. In response to the changing situation, the simulator translates these commands into new conditions. The sequence continues until all fossil fuels are exhausted. Workshops and demonstrations can be arranged.

- Curriculum Innovations, Inc.
  501 Lake Forest Avenue
  Highwood, IL 60040

CURRENT ENERGY AND ECOLOGY: A classroom publication which covers current ecological issues in a news magazine format, and includes background stories on environmental affairs. While intended for high school students, it is useful for advanced middle school students as well. $3.75 per student/school year, fifteen subscriptions minimum.

- Cosmographies
  P.O. Box 3524
  Portland, ME 04104

SOLAR CONSEQUENCES: A black and white calendar jam-packed with little-known and interesting facts. $6.00

- Education Development Center
  School and Society Programs
  55 Chapel Street
  Newton, MA 02161
  Tel. (617) 969-7100

ENERGY, PEOPLE, AND THE ENVIRONMENT--COAL MINING: This month-long program for secondary students includes the following components: a student book, a teacher's guide (including evaluation strategies), a filmstrip, two posters, and two audio tapes.

- Energy and Man's Environment
  0224 S.W. Hamilton, Suite 301
  Portland, OR 97201
  Tel. (503) 226-7131

ENERGY AND CONSERVATION EDUCATION ACTIVITIES FOR THE CLASSROOM (1978): Four notebooks for grades 1-12 contain implementation handbooks and an activity matrix identifying topics, activities, grade levels, and subject matter. The books discuss concepts, objectives, time needed, assessment procedures, and other information necessary for successful classroom use. The materials, however, are only a small part of this whole program which is being diffused to Maryland, New Hampshire, and possibly Rhode Island.

- Environmental Action Resource Service (EARS)
  P.O. Box 545
  LaVeta, CO 81055
  Tel. (303) 742-3221

This organization publishes catalogues listing books, publications, and other items. Some classroom materials are listed.

- ERIC Clearinghouse for Science,
  Mathematics, and Environmental Education
  Information Reference Center
  1200 Chambers Road, Room 310
  Columbus, OH 43212

ENERGY ACTIVITIES FOR THE CLASSROOM VOL. II: $3.00

- Exxon Co., U.S.A.
  P.O. Box 2180
  Houston, TX 77001

MICKEY MOUSE AND GOOFY EXPLORE ENERGY: Comic book characters lead a search through the ages for new sources of energy and better ways to use it. FREE

MICKEY MOUSE AND GOOFY EXPLORE ENERGY CONSERVATION: Comic book which can be used as an energy conservation teaching aid. FREE

DRIVING LIKE THERE'S NO TOMORROW: Booklet discussing the benefits of driving at fifty-five mph. FREE

- Federation in the Humanities
  15 South Fifth Street, Room 720
  Minneapolis, MN 55402
  Tel. (612) 332-2407

ENERGY--PERSPECTIVES FROM THE HUMANITIES: Four essays for general audiences briefly introduce energy perspectives.

- Friends of the Earth
  529 Commercial Street
  San Francisco, CA 94111

ENERGY AND ORDER, OR, IF YOU CAN'T TRUST THE LAW OF CONSERVATION OF ENERGY, WHO CAN YOU TRUST?: A high school teaching sequence leads students to an understanding of their personal energy use, to a realization of the moral nature of assumptions underlying energy decisions, and to a belief that they can and should participate in decisions affecting their and their planet's life.

- Global Development Studies Institute
  Millbrook Preparatory School
  School Road
  Millbrook, NY 12545
  Tel. (914) 677-8261

ENERGY IN AN INTERDEPENDENT WORLD: A case study of a global issue with selected bibliography and glossary. $5.00

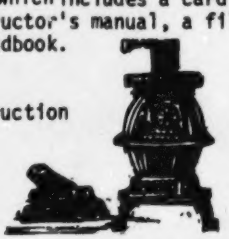
- Hatheway Environmental Education Institute
  Massachusetts Audubon Society
  Lincoln, MA 01773
  Tel. (617) 259-9500

ENERGY PACKET: A portfolio of materials containing an introductory sheet, an index on the various aspects of the energy problem, and bibliographies. Suggested for teachers and older students. $5.00

THE ENERGY CRISIS--AIDS TO STUDY: An annotated listing of books, magazine articles, curriculum guides, and audio-visual materials for elementary and secondary grades. $1.25

- Hubbard
  1946 Raymond Street
  Northbrook, IL 60062
  Tel. (312) 272-7810

ENERGY AND SOCIETY--INVESTIGATIONS IN DECISION MAKING: A program for high school and college levels which includes a card set, an energy management game, an instructor's manual, a film loop, slides, and a 120 page student handbook.



- Indiana Department of Public Instruction
  Division of Curriculum
  State House, Room 229
  Indianapolis, IN 46204

  Contact: Margaret Van Gundy

ENERGY CURRICULUM FOR THE ELEMENTARY GRADES: Fifty-four integrated lessons are explained in three units, one for each level, K-1, 2-3, and 4-6. FREE

- Innovative Communication, Inc.
  1885 Oak Park Boulevard
  Pleasant Hill, CA 94523
  Tel. (415) 944-0923

AUNT ENERGINA'S ALMANAC: This colorful workbook, designed for primary grades, features a variety of classroom activities which teach about energy sources, basic electricity, and electrical safety. While offering energy education, the activities also stress basic skills.

THE ADVENTURES OF AUNT ENERGINA: A companion workbook for grades 4-6 which emphasizes the importance of energy conservation using a series of comic-type adventures, reinforced by curriculum-related activities.

Each of the above workbooks has an accompanying teacher's guide. Secondary materials are in the developmental stage.

- Maine Audubon Society
  Energy Department
  118 Old Route One
  Falmouth, ME 04105

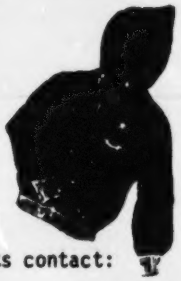
ENERGY ACCESS--A GUIDE TO ACTIVITIES AND RESOURCES FOR EDUCATORS: Developed largely by Maine teachers, this booklet serves as a guide for educators interested in developing interdisciplinary energy curriculum for grades K-12. It includes suggested activities that have been proven in the classroom, and a supplemental resource listing of publications and organizations. $4.25

VOCATIONAL REGION 10 SOLAR GREENHOUSE--A RESOURCE BOOKLET FOR VOCATION EDUCATORS: In 1977, vocational education students and area experts constructed a low-temperature solar greenhouse. This facility incorporates features to deal with heat loss and storage in winter climates and ventilation requirements balancing carbon dioxide. The theory, costs, and implementation concepts are described for the general public. $4.50

- Massachusetts Electric Company

  In Eastern Massachusetts contact:

  Educational Coordinator
  Consumer Services Department
  1101 Turnpike Street
  North Andover, MA 01845
  Tel. (617) 683-9511



  In Central and Western Massachusetts contact:

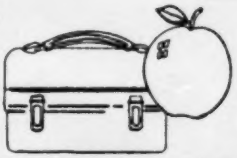
  Educational Coordinator
  Consumer Services Department
  939 Southbridge Street
  Worcester, MA 01610
  Tel. (617) 791-8511

EDUCATIONAL SERVICES CATALOG and 1979-80 SUPPLEMENT: A listing

of films, videotapes, literature, resource kits, posters, speakers, tours, and teacher workshops available without charge for people within their service areas.

- Massachusetts Public Interest Research Group (MASS. PIRG)
  233 North Pleasant Street or 120 Boylston Street, Room 320
  Amherst, MA 01002 Boston, MA 02116
  Tel. (413) 256-6434 Tel. (617) 423-1796

A source for POSTERS and BROCHURES.



- McDonald's Action Packs
  P.O. Box 2594
  Chicago, IL 60690

McDONALD'S ECOLOGY AND ENERGY ACTION PACKS: Designed for grades 4-6, the action pack uses entertaining activities to increase students' understanding of the food chain, air and water pollution, recycling, and energy. Includes sixteen activity masters.

- Minnesota Environmental Sciences Foundation, Inc.
  5430 Glenwood Avenue
  Minneapolis, MN 55422

THE HYDROCARBON CIVILIZATION ENERGY TRIAL MATERIALS: Designed to help grades 10-12 identify their interests in energy, become aware of the nature of various energy options, generate images of the future, and learn how they and others think about energy. Activities are short and flexible, requiring from one to three class periods of approximately forty-five minutes to complete. They make use of and help teach skills in science, social studies, mathematics, and language arts.

- National Science Teachers Association
  1742 Connecticut Avenue, NW
  Washington, DC 20009
  Tel. (202) 265-4150

ENERGY & EDUCATION: A free bimonthly newsletter serving teachers, administrators, and civic groups involved in energy education. Regular features include: editorials; listings of new, free, and inexpensive materials; book reviews; current data on the energy situation; and a calendar of coming events.

THE ENERGY-ENVIRONMENT SOURCE BOOK: Deals candidly with the issues and problems of energy, as well as with basic facts. Written for teachers in an informal easy-to-read style, it includes extensive tables and illustrations.

- National Solar Heating and Cooling Information Center
  P.O. Box 1607
  Rockville, MD 20850
  Tel. (800) 523-2929

INFORMATION CARDS ABOUT SOLAR HEATING
SOLAR ENERGY TECHNICAL TRAINING DIRECTORY: A nation-wide listing of schools offering solar technical training.

- Nashville Metropolitan Schools
  Environmental Education Department
  Nashville, TN 37219

  Contact: Lib Roller, Coordinator

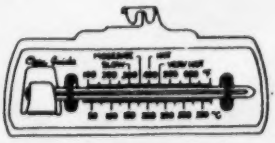
TEACHERS HANDBOOK, GRADE 5, ENVIRONMENTAL EDUCATION: A 150 page manual emphasizing a variety of environmental issues including a special thirty-two page section on energy. FREE

- National Wildlife Federation
  1412 16th Street, NW
  Washington, DC 20036

ENERGY: Booklet listing resource materials for developing energy education and conservation programs. FREE

RANGER RICK'S BEST: Articles about air pollution, recycling, energy conservation, and related topics. Ask for the packet of reprints from "Ranger Rick's Magazine", addressing this request in care of Department BB.

THE BEST PRESENT OF ALL: A king searches for the best present for future generations. He finds solar energy. Recommended for grades K-6. 30¢



- New Western Energy Show
  226 Power Block
  Helena, MT 59601
  Tel. (406) 259-1958

GET YOUR HANDS ON ENERGY--A TEACHING GUIDE ABOUT RENEWABLE RESOURCES AND CONSERVATION: Outlines plans for lessons and describes projects using low cost materials. Mostly for younger age groups, but the information is adaptable to older grades. $5.00 plus postage.

- Northampton Energy Conservation Analysis Program
  99 Main Street
  Northampton, MA 01060
  Tel. (413) 586-5777

ENERGY YELLOW PAGES for Western Massachusetts.

- North Carolina Department of Public Instruction
  Division of Science Education
  Raleigh, NC 27602

ENVIRONMENTAL EDUCATION - STRATEGIES FOR WISE USE OF ENERGY: Designed for elementary and secondary school teachers, this seventy-one page publication contains interdisciplinary instructional activities and an appendix of check lists, selected readings, films, etc. $1.50

- Northeast Appropriate Technology Network, Inc.
  70 Federal Street
  Greenfield, MA 01301
  Tel. (413) 774-2257

  Contact: Britt Warren

HANDS ON: A GUIDE BOOK TO APPROPRIATE TECHNOLOGY IN MASSACHUSETTS: Lists resource groups and deomonstration sites which promote and use renewable energy, biological agriculture, and energy conserving design. The first edition may be purchased for $3.75 plus postage. Schools and those submitting bulk orders receive a discount. A revised and extended edition will be released in late autumn.

- Northeast Utilities

  Contact one of the following local offices: Connecticut Light and Power, Hartford and Western Massachusetts Electric Companies, Holyoke Water Power Company and Northeast Nuclear Energy Company.

CONSERVATION: This energy saving game includes spinning dial, markers, and cardboard fold-out game board. Players follow the conservation path receiving penalties for wasting energy. The first player to reach the National Energy Watch Home is the winner. FREE

ENERGY--IT'S YOUR CHOICE: For grades 5-7, this audio-visual kit includes a filmstrip, cassettes, duplicating masters and a teacher's guide.

- Northwest Regional Educational Laboratory
  Office of Marketing
  710 SW Second Avenue
  Portland, OR 97204

These five computer education units and accompanying teacher guides are available for grades 9-14: 1) OUR U.S ENERGY, 2) THE GLOBAL ENERGY SITUATION, 3) A COMPUTER SIMULATION OF THE U.S. ENERGY CRISIS, 4) COMPUTER ORIENTED EXERCISES ON ATTITUDES AND U.S. GASOLINE COMSUMPTION, and 5) A COMPUTER ORIENTED PROBLEM SOLVING UNIT. Computer language used in each is Basic. Cost includes postage.

- Executive Office of
  Energy Resources
  73 Tremont Street
  Boston, MA 02108
  Tel. (617) 727-7297

  or

  94 State Street
  Springfield, MA 01103
  Tel. (413) 727-0562

A LIST OF MASSACHUSETTS SOLAR INDUSTRIES: A compilation of individuals and companies operating in Massachusetts in solar energy design, distribution, installation, research, and manufacturing. Might be a source for speakers or tour sites.

- Rain: A Journal of Appropriate Technology
  2270 NW Irving Street
  Portland, OR 97210

Black and white sketches, used as illustrations in "Summary: Region One, Appropriate Technology Small Grants Program", are listed as available for $3.00 each. For a description of the "Summary", see the listing in this section under United States Department of Energy, Boston.

- Resource and Referral Service
  The Center for Vocational Education
  The Ohio State University
  1960 Kenny Road
  Columbus, OH 43210

RESOURCES FOR SCHOOL ENERGY NEEDS: A mini-list of organizations involved with various aspects of school energy. The brochure specifies addresses, telephone numbers, contact people, and brief descriptions. A sampling of organizations includes: Energyline, Educational Facilities Laboratories, Energy and Education Action Center and others. These brochures are available free and in quantity.

- Soft-Aware Associates, Inc.
  P.O. Box 80
  Marlborough, NH 03455

ENERGETICS--NATURE'S ENERGY GAME: For the entire family, this game sweeps players across the environments of North America, visiting places where Mother Nature conserves energy. You win by discovering her clues. Different every time it's played. $15.95

ENERGETICS ACTIVITY BOOK: Individualized activities to explore the natural flow of energy where you live and your own use of energy. $1.00

NUCLEAR POWER PLANTS: A SHOCKING HARVEST
PLANT FOR THE FUTURE: HARVEST THE SUN

These two-sided posters explore the options of nuclear power and solar energy. Posters fit together to form a mural. Reverse sides carry graphs, maps, charts and similar textual information. $3.50 each or $6.00 for the set of two.

- Solar Booksmith
  21 Burnside Avenue
  Somerville, MA 02144
  Tel. (617) 628-5558

SOLAR ENERGY: PUTTING THE SUN TO WORK: This illustrated, large-format paperbound book describes solar energy and its many uses in a text that will appeal especially to ages 8-12. It may also be used as a picture book with younger children. $3.00 or $3.50 by mail.

- Solar Energy Elementary Project
  Bureau of Science Education
  State Department of Education
  Albany, NY 12234
  Tel. (518) 473-1965

SOLAR ENERGY ELEMENTARY PROJECT CURRICULUM: A comprehensive solar energy curriculum designed for integration into existing subjects, grades K-6. The curriculum includes teacher and student sections, demonstration projects, solar bibliographies, and background information. Materials are free to teachers interested in assisting with field-testing. See listing below for a description of secondary materials, and where to request them.

- Solar Energy Secondary Project
  University of Southern California
  Mechanical Engineering Department
  Los Angeles, CA 90007
  Tel. (213) 741-2944

  Contact: Dr. Seymour Lampert

SOLAR ENERGY SECONDARY PROJECT CURRICULUM: A comprehensive solar energy curriculum designed for integration into the existing science program. The curriculum includes teacher and student sections, demonstration projects, solar bibliographies, and background information. Materials are free to teachers interested in assisting with field-testing. See listing above for a description of elementary materials and where to request them.

- Standard Oil Company
  Corporate Social Policy Division
  Mail Code 2301
  P.O. Box 5910-A
  Chicago, IL 60680

CHOICES, DECISIONS, ACTIONS: A teacher's guide with six duplicating activity sheets which may be used to prepare students, grades 6-9 for science-related careers. FREE

- Standard Oil Company (Indiana)
  Public and Government Affairs Division
  Mail Code 3705
  P.O. Box 5910-A
  Chicago, IL 60680
  Tel. (312) 856-6111

OIL IN DEPTH: A thirty-page story about petroleum exploration, development, and production. FREE

CATALYSTS AND CRUDE: A twenty-two page story about petroleum refining. FREE

These pamphlets are available in student quantities:

IT'S A GREAT SYSTEM: Reviews the competitive private enterprise market system and how it works.

FREEDOM OF CHOICE: Discusses ten economic freedoms.

BASIC ECONOMIC CONCEPTS: Reviews seven concepts.

OUR ENERGY FUTURE: Reviews thirteen energy sources.

The following descriptive folders are available to teachers:

LIVING WITH ENERGY, THE KINGDOM OF MOCHA, and AMOCO TEACHING AIDS

Other information sheets include:

ECONOMIC EDUCATION SEMINAR: Outlines a twelve-week course.

ENERGY IN THE U.S.: A chart of energy sources and consumption.

ENERGY CONSERVATION, ENERGY ISSUES, ENVIRONMENT AND ECOLOGY, and SOCIAL RESPONSIBILITY

- Starting Points
  Department 3733
  P.O. Box 818
  Maple Plain, MN 55348

Their LEARNING ACTIVITY POSTERS offer compact, inexpensive teaching aids which challenge and motivate students. The ENERGY FOR TODAY AND TOMORROW poster (#244) includes Pull the Plug, an energy consciousness, energy conservation game where players try to avoid a blackout. Solar Energy: Day and Night, features pictorial diagrams of current uses and future potential of solar energy with special emphasis on storage. Recommended for kindergarten through junior high school groups. Single posters cost $2.00.

- Sundries
  1001 Connecticut Avenue, NW, 5th floor
  Washington, DC 20036
  Tel. (202) 466-6350

SOLAR ENERGY EDUCATION PACKET FOR ELEMENTARY AND SECONDARY STUDENTS: An interdisciplinary selection of solar activities, reading lessons, and background material on renewable resources: sun, wind, water, and biomass. The packet also includes a comprehensive, annotated bibliography of K-12 solar publications.

- Tennessee Energy Authority
  250 Capitol Hill Building
  Nashville, TN 37219

IDEAS AND ACTIVITIES FOR TEACHING ENERGY CONSERVATION, GRADES 7-12: A 225 page manual developed to increase awareness and understanding of the energy situation using an interdisciplinary approach. Includes forty-nine teaching actitivies. FREE

- Thomas Alva Edison Foundation
  Cambridge Office Plaza, Suite 143
  18280 West Ten Mile Road
  Southfield, MI 48075

ENERGY CONSERVATION EXPERIMENTS YOU CAN DO: 25¢ each

- Union Oil Company of California
  Corporate Communications, Department A
  P.O. Box 7600
  Los Angeles, CA 90051
  Tel. (213) 486-7702

GEOTHERMAL ENERGY: This twelve page illustrated booklet explains the harnessing of the earth's natural heat. Available free in classroom quantities.

THE STORY OF GEOTHERMAL ENERGY: An illustrated foldout poster showing the earth's heat being used to provide electrical energy. FREE. Limit: three.

THE STORY OF OIL: An illustrated wall psoter featuring cartoon characters telling the story of oil from formation to its many uses. FREE Limit: three.

- United States Department of Energy
  Region One
  150 Causeway Street
  Boston, MA 02114
  Tel. (800) 392-6159

SUMMARY: REGION ONE APPROPRIATE TECHNOLOGY SMALL GRANTS PROGRAM: Briefly describes seventy-four projects funded by the United States Department of Energy in the New England region. The programs involve people in projects close to home, teaching others as they learn themselves. Interesting reading and many places may allow visitors.

- United States Department of Energy
  Office of Public Affairs
  1000 Independence Avenue, SW
  Washington, DC 20545
  Tel. (202) 252-5568

BLACK CONTRIBUTORS TO SCIENCE AND ENERGY TECHNOLOGY: A profile of scientists and inventors who contributed to American science and technology.

- United States Department of Energy
  Technical Information Center
  P.O. Box 62
  Oak Ridge, TN 37830
  Tel. (615) 576-1188

AWARD WINNING ENERGY EDUCATION ACTIVITIES FOR ELEMENTARY AND SECONDARY TEACHERS: A brief description of ten classroom activities designed to fit easily into standard courses and further student understanding of energy issues. Sample topics include: energy in art, living with wind power, and twenty aluminum recycling experiments.

ENERGY CONSERVATION IN THE HOME--AN ENERGY EDUCATION/CONSERVATION GUIDE FOR HOME ECONOMICS TEACHERS: A source of information, instructional materials, and suggested references about the energy situation as a whole, energy concepts, and the use of energy in the home.

ENERGY EDUCATION WORKSHOP HANDBOOK: A handbook for workshop leaders to help teachers at all grade levels and subject areas who are using National Science Teachers Association energy/environment/economics materials. Topics covered include infusing energy concepts into current programs; expanding topics to include energy implications; and how to use local problems and resources to teach about energy.

FACT SHEETS ON ALTERNATIVE ENERGY TECHNOLOGIES:

- Fuels From Plants
- Fuels From Wastes
- Wind Power
- Solar Sea Power
- Solar Heating & Cooling
- Geothermal Energy
- Breeder Reactors
- Nuclear Fusion
- Electricity From the Sun I & II
- Energy Storage Technology
- Conventional Reactors
- New Fuels From Coal
- Energy Conservation: Homes, Buildings, Industry & Transportation
- Alternative Energy Sources: Environmental Impacts, Glossary, & Bibliography

INSTRUCTIONAL PACKETS: Twenty-six instructional packets comprise a series of interdisciplinary student/teacher materials on energy, the environment, and the economy. Designed for infusion into existing curricula, they feature a wide range of activities which encourage direct student participation while introducing basic energy concepts. (See next page for titles and grade levels).

How a Bill Becomes a Law to Conserve Energy (9, 11, 12)
Agriculture, Energy, and Society (10-12)
Energy, Engines and the Industrial Revolution (8-9)
Transportation and the City (8-9)
Community Workers and the Energy They Use (2-3)
The Energy We Use (1-2)
Energy and Transportation (3-5)
Mathematics in Energy (7- 8)
U.S. Energy Policy: Which Direction? (11 - 12)
Energy Transitions in United States History (8 - 9)
Networks: How Energy Links People, Goods and Services (4 - 5)
Bringing Energy to the People: Ghana and the U.S. (6 - 7)
Energy in the Global Marketplace (9, 10, 11)
Two Energy Gulfs (6 - 7)
Western Coal: Boom or Bust? (11)
There is Enough Energy, But...(High School Chemistry and Physics)
Nuclear Energy (High School Sciences or American Studies)
Solar Energy (Junior High/Upper Elementary Sciences)
Bioconversion (High School Biology and Chemistry)
Coal (Junior High/Upper Elementary Sciences)
Energy for the Future (High School Physics)
Energy as an Investment Choice (High School Economics, American Studies, Mathematics)
Exponential Growth (Intermediate/Junior High Social Studies, Mathematics, Science)

YOUR ENERGY WORLD: Four units present an overview of energy definitions, resources, possible energy problems, and conservation in the community. Eighteen activity masters can be adapted to curricula (grades 9-12) in science, social studies, language arts, mathematics, and art. A two-sided wallchart illustrates the major energy resources, the potentials for the future, and energy conservation tips.

- University of Wisconsin
  Sea Grant College Program
  1800 University Avenue
  Madison, WI 53706

EARTHBEATS NEWSPAPER NO. 1 ON ENERGY: Describes efforts to find new sources of fuel.

- Ventura County Superintendent of Schools
  County Office Building
  Ventura, CA 93001

  Contact: James Cowan, Superintendent

ENERGY CRISIS IN THE PUBLIC SCHOOLS: ALTERNATIVE SOLUTIONS: A comprehensive checklist approach to energy conservation and the schools. Secondary and adult reading. $2.00

- Virginia Energy Office
  823 East Main Street
  Richmond, VA 23219

ENERGY IN THE CLASSROOM--ACTIVITY GUIDE FOR GRADES 8-12: Helps secondary teachers increase their students' energy consciousness as they teach about words, numbers, and everyday life. Incorporates energy activities into American history, art, biology, chemistry, drama, driver education, economics, English, federal government, foreign languages, geography, home economics, industrial arts, journalism, mathematics, physical science, physics, sociology, and psychology courses. FREE

- Walt Disney Educational Media Company
  500 South Buena Vista Street
  Burbank, CA 91521

ENERGY EDUCATION COMIC BOOKS

- Whirlpool Corporation
  Public Relations Department
  2000 U.S. Route 33
  Benton Harbor, MI 49022

SAVING ENERGY COLORING BOOK

Just before going to press we learned about the items below.

- Association for Public Transportation, Inc.
  P.O. Box 192
  Cambridge, MA 02238
  Tel. (617) 482-8584

YOUNG PEOPLE'S GUIDE TO PUBLIC TRANSPORTATION: Two transit education kits for grades 4 and 5, or grades 6 and 7, are available for use in classroom or extra-curricular programs. While explaining how to use public transportation, the materials (workbooks, a teacher's manual, transit maps, and timetables) emphasize navigation skills. The curriculum is designed to be incorporated into a field trip to the Museum of Transportation. Mostly suited to residents of the Greater Boston area. FREE

- Northeast Regional Resource Exchange
  Regional Office
  United States Department of Education
  John F. Kennedy Building, Room 2403
  Boston, MA 02203
  Tel. (617) 223-6814

ENERGY RESOURCE MANAGEMENT CATALOG, K-12 CURRICULUM: This catalog presents a sample of the types of energy education materials available for use by teachers and others. Section I describes agencies in the New England/New York region which provide information and/or services to educational personnel. Section II lists a sample of materials in these same areas, many of which can be obtained from or reviewed at agencies listed in Section I. After September, the Regional Exchange staff expects to be at a new location. Readers may find it easier to telephone after that time.

FUNDING SOURCES

Reprinted below is an edited version of "Some Possible Private Funding Sources for Energy Proposals" developed by Dr. Thomas Nyquist, Coordinator of Grants Development, State University College, 3 Hohmann House, New Paltz, NY 12563. Following this, we have added some information from the United States Department of Energy.

Please contact these organizations directly for specific funding information:

* * * * * *

- ALLIED CHEMICAL FOUNDATION
  1411 Broadway
  New York, NY 10018
  Tel. (201) 455-2671

- THE ARCA FOUNDATION
  100 East 85th Street
  New York, NY 10028
  Tel. (212) 861-8300

- CHARLES E. CULPEPER FOUNDATION
  866 United Nations Plaza, Room 408
  New York, NY 10017
  Tel. (212) 755-9188

- EXXON USA FOUNDATION
  800 Bell Avenue
  Houston, TX 77002
  Tel. (713) 656-3008

- FORD FOUNDATION
  320 East 43rd Street
  New York, NY 10017
  Tel. (212) 573-5000

- GENERAL ELECTRIC FOUNDATION
  1285 Boston Avenue
  Bridgeport, CT 06602
  Tel. (203) 334-1012, ext. 2660

- GENERAL SERVICE FOUNDATION
  c/o James P. Shannon
  400 Foshey Tower
  821 Marquette Avenue
  Minneapolis, MN 55402
  Tel. (612) 339-7343

- WILLIAM AND FLORA HEWLETT FOUNDATION
  Two Palo Alto Square, Suite 1010
  Palo Alto, CA 94304
  Tel. (415) 493-3665

- MINNESOTA MINING AND MANUFACTURING FOUNDATION
  3M Center
  St. Paul, MN 55101
  Tel. (612) 733-1110

- OLIN CORPORATION CHARITABLE TRUST
  East Alton, IL 62024
  Tel. (203) 356-3301

- PEPSICO FOUNDATION
  Purchase, NY 10577
  Tel. (914) 253-3119

- ROCKEFELLER BROTHERS FUND
  30 Rockefeller Plaza
  New York, NY 10020
  Tel. (212) 247-8135

- ROCKEFELLER FAMILY FUND
  49 West 49th Street
  New York, NY 10020
  Tel. (212) 247-8135

- ALFRED P. SLOAN FOUNDATION
  630 Fifth Avenue
  New York, NY 10020
  Tel. (212) 582-0450

- STERN FUND
  21 East 40th Street
  New York, NY 10016
  Tel. (212) 532-0617

- WESTINGHOUSE EDUCATIONAL FOUNDATION
  Westinghouse Education Center
  Ardmore Boulevard and Brinton Road
  Pittsburgh, PA 15221
  Tel. (412) 256-5635

- UNITED STATES DEPARTMENT OF ENERGY

  Try these addresses for funding available through this department:

  Office of Procurement
  Railway Labor Building, Room 409
  Washington, DC 20585
  Tel. (202) 376-9203

GENERAL INFORMATION on the submission of unsolicited proposals.

Education Division
1000 Independence Avenue, Room 8055
Washington, DC 20585
Tel. (202) 252-6481

INSTRUCTION AND INFORMATION ON USED ENERGY-RELATED LABORATORY EQUIPMENT GRANTS FOR EDUCATIONAL INSTITUTIONS OF HIGHER LEARNING: Lists available equipment and application instructions.

Education Division
1000 Independence Avenue, Room 8055
7E054
Washington, DC 20585
Tel. (202) 252-6480

Contact: Dr. Ruth Ann Verell

PRE-FACE (Pre-Freshman and Cooperative Education) for minorities in engineering: Competitive grants "to promote equitable participation of all Americans in energy-related careers; specifically to increase the educational opportunities available to qualified...minorities group members and women in the field of engineering." Colleges and universities may apply for funds to "train or update the training of college science teachers in energy resource alternatives, conservation, environmental effects, and social/political aspects of energy development."

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MEDIA

If one picture is worth a thousand words, then educators may choose to introduce new energy topics or enhance classroom discussions with films offered from the following distributors:

* * * * * * *

- American Petroleum Institute
  Education Programs and Services
  Public Relations Department
  2101 L Street, NW
  Washington, DC 20037
  Tel. (202) 457-7040

MOVIES ABOUT OIL--A CATALOG

- Barr Films
  P.O. Box 5667
  3490 East Foothill Boulevard
  Pasedena, CA 91107
  Tel. (213) 793-6153

THE ENERGY CONNECTION: An animated 16mm film raising human value questions related to energy use. It considers futures based on current attitudes. (20 minutes).
For a humanities discussion guide designed to accompany this film,contact:

Federation of Public Programs in the Humanities
15 South Fifth Street, Room 720
Minneapolis, MN 55402
Tel. (612) 332-2407

- Bullfrog Films, Inc.
  Oley, PA 19547
  Tel. (215) 779-8226

BULLFROG FILMS CATALOG: A collection of 16mm, color sound films, which point the way to food and energy policies that will help sustain life on our planet. A sampling of titles includes: Pedal Power, Toast, Lovejoy's Nuclear War, and Living the Good Life. These audio-visuals are available to schools, public libraries, and churches on a rental basis or for purchase.

FILMS ON ENERGY: Films providing practical information on solar, nuclear, wind and wood energy are described in this fold-out

poster. Additional information includes film length, rental and sale prices, and an order blank. Several energy awareness films are also listed.

- Cine Manifest Productions
  308 11th Street
  San Francisco, CA 94103
  Tel. (415) 626-5596

WESTERN COAL--AN AMERICAN DILEMMA: Through interviews and visual impressions, this film explores the implications of the past and future development of coal resources in Montana, Wyoming, and North Dakota. (16mm, 30 minutes).

- Connecticut Humanities Resource Center
  Buley Library
  Southern Connecticut State College
  New Haven, CT 06515
  Tel. (203) 397-4543

CONVERSING ABOUT THE ISSUES--SOLAR POWER AND POLITICAL POWER-HOW THE TWO ARE RELATED: Panelists consider the political, social, and economic ramifications of a serious shift to solar energy. (1/2" videocassette, 120 minutes)

- Environmental Protection Agency
  2203 John F. Kennedy Building
  Boston, MA 02203
  Tel. (617) 223-7223

Request information on energy films.

- Florentine Films
  P.O. Box 25
  Amherst, MA 01002
  Tel. (413) 584-0816

  Contact: Larry Hott

Request a bibliography and review of films dealing with alternative energy and appropriate technology.

- Gordon Massingham
  3 Tobey Garden Street
  Duxbury, MA 02332
  Tel. (617) 934-6156

THE MASSACHUSETTS STORY: A documentary on the controversy surrounding oil drilling and production on the Georges Bank, a large and fertile fishing ground off Cape Cod. (16mm, 60 minutes)

- Modern Talking Picture Service
  5000 Park Street
  St. Petersburg, FL 33709

THE KINGDOM OF MOCHA: An animated 16mm color film which introduces economic concepts about the free market system in relation to the energy needs of society. Free on loan. (This film is produced by Standard Oil Company.)

- National Audiovisual Center
  National Archives and Records Service
  General Services Administration
  Reference Section/PC
  Washington, DC 20409
  Tel. (301) 763-1896

27 ENERGY FILMS: A catalog of 16mm color films for schools, colleges, libraries, and industry on energy sources and conservation. All films are available for preview and purchase from the center, or for free loan. FREE

- New England Coalition on Nuclear Pollution, Inc.
  P.O. Box 637
  Brattleboro, VT 05301
  Tel. (802) 257-0336

Their film rental library houses over twenty films and slide shows. A brochure of educational resources describes the films, including the production date, length, and appropriate audience. Rental fees range from $5.00-$25.00.

- The Ohio Program in the Humanities
  70 Pleasant Ridge Avenue
  Columbus, OH 43209

ATOMIC AMERICA--30 YEARS INTO THE NUCLEAR AGE: A treatment of the history of nuclear power and issues related to its use. (slide-tape presentation, 45 minutes)

- Soft-Aware Associates, Inc.
  P.O. Box 80
  Marlborough, NY 03455

REEL CHANGE--A GUIDE TO FILMS ON APPROPRIATE TECHNOLOGY: A guide to the best and worst of rental films. The authors rate more than eighty movies and provide a directory of distributors. $3.50

- Standard Oil Company (Indiana)
  Corporate Social Policy Division
  Mail Code 2301
  P.O. Box 5910-A
  Chicago, IL 60680

CONCEIVE IT, BELIEVE IT, ACHIEVE IT: Based on the Chicago Public Schools City Science Fair, this colorful 16mm film demonstrates the important role parents, teachers, and counselors play in helping minority youth prepare for technical careers. Free on loan.

- Standard Oil Company
  Public and Governmental Affairs Division
  Mail Code 3705
  P.O. Box 5910-A
  Chicago, IL 60680

LIVING WITH ENERGY: This 16mm documentary film reviews the energy situation and discusses energy sources, types, use, and conservation.

- Tenneco Inc.
  Public Affairs Department
  P.O. Box 2511
  Houston, TX 77001

THE FOURTH R: A film and companion booklet are available to school patrons, professional educators, and others interested in the quality of schools and in energy management. May be borrowed without cost.

- United States Department of Energy
  Technical Information Center Film Library
  P.O. Box 62
  Oak Ridge, TN 37830
  Tel. (615) 576-1287

ENERGY FILM CATALOG: Lists over two hundred 16mm film titles which are loaned free to schools, the public, and television for non-profit exhibition. Organizations wishing to purchase these films should request the latest price quotation from:

The Education Development Center
55 Chapel Street
Newton, MA 02160
Tel. (617) 969-7100

- University of Wisconsin at Madison
  WHA Radio
  A21 University Avenue
  Madison, WI 53106
  Tel. (608) 263-3970

  Contact: Sylvia Murn

BALANCE OF POWER: A balanced presentation of the social, economic, and political issues surrounding nuclear energy. (3/4" videocassette, 60 minutes)

FREE NEWSLETTERS

These newsletters offer articles on current energy facts and issues; supply sources of free posters, reports, and curriculum materials; and provide research topics for students. Get your name on their mailing lists.

* * * * * * *

- Agency for International Development
  International Development Cooperative Agency
  Office of Public Affairs
  Washington, DC 20523

  AGENDA

- Environmental Protection Agency
  2203 John F. Kennedy Building
  Boston, MA 02203

  ENVIRONMENT NEWS

- National Science Teachers Association
  1742 Connecticut Avenue, NW
  Washington, DC 20009

  ENERGY AND EDUCATION

- Northeast Solar Energy Center
  470 Atlantic Avenue
  Boston, MA 02110

  THE NESEC UPDATE and THE NESEC FOCUS

- Project S.U.E.D.E.
  Cooperative Extension Service
  United States Department of Agriculture
  University of Massachusetts
  Amherst, MA 01003

  SHINE

- United States Department of Energy
  Office of Public Affairs
  1000 Independence Avenue, SW
  Washington, DC 20545

  ENERGY INSIDER

- United States Department of Energy
  Office of Consumer Affairs
  1000 Independence Avenue, SW
  Washington, DC 20545

  THE ENERGY CONSUMER

- Western Massachusetts Solar Energy Association
  c/o Cooperative Extension Service
  Energy Education Center
  Tillson Farm
  Amherst, MA 01003

  W.M.S.E.A. BULLETIN

RESOURCE CENTERS AND ORGANIZATIONS

This publication concludes with a listing of organizations and associations which offer energy information to educators and citizens. While some have been referred to in previous sections, others are described here for the first time.

* * * * * * *

- AMERICAN WIND ENERGY ASSOCIATION
  1609 Connecticut Avenue, NW
  Washington, DC 20009

Advocates the use of wind energy conversion systems as alternatives to energy systems which depend on depletable fuels. The association has two regular publications, WINDLETTER, and THE WIND TECHNOLOGY JOURNAL.

- CENTER FOR ECOLOGICAL TECHNOLOGY
  74 North Street, Room 617
  Pittsfield, MA 01201
  Tel. (413) 445-4556

The center works primarily in the area of community education. Listed among their services are energy audits, building design consultation, an energy hotline, speakers, slide presentations, and tours of solar sites. A bimonthly newsletter including information on local activities, legislation, and a calendar of events is available on a subscription basis.

- THE CHRISTIAN A. HERTER CENTER
  1175 Soldiers Field Road
  Allston, MA 02138
  Tel. (617) 783-0609

This environmental learning center helps individuals and communities make choices regarding the utilization and conservation of natural resources. Past activities have included lectures, workshops, and tours of solar sites. The center plans to develop and implement environmental and energy curricula for Massachusetts schools.

- EDISON ELECTRIC INSTITUTE
  90 Park Avenue
  New York, NY 10016
  Tel. (212) 573-8700

- Energy Education Resource Center
  University of Hartford
  College of Engineering
  200 Bloomfield Avenue
  West Hartford, CT 06117
  Tel. (203) 243-4844

Contact: Jack W. Keenan, Director of Special Programs

This information and materials center offers visiting programs, teacher workshops, lending materials, model demonstrations, a speakers bureau and an assembly program. Some of their models include a miniature solar home, bicycle generators, and a metered power useage board where students see the amount of energy small household appliances use and project the cost of running them.

- Energy Resource Group (ERG)
  Northeast Regional Education Center
  219 North Street
  North Reading, MA 01864
  Tel. (617) 727-0600

ERG provides energy-related curricula, materials, and services to educators served by the Northeast Regional Center of the Department of Education. Open 9:00 a.m. to 5:00 p.m., they offer a reference library, curriculum materials, and seminars. Future plans include developing an audio-visual lending library. You are invitied to call, write, or visit.

- Environmental Resource Library
  Laughing Brook Education Center and Wildlife Sanctuary
  798 Main Street
  Hampden, MA 01036
  Tel. (413) 566-3571

Contact: Anne Tiberio or Jo Benton

This library houses displays for energy conferences, workshops, and seminars; curriculum guides; bibliographies and directories; periodicals; and slide programs. Regular admission to the sanctuary permits on-site use of the library. Loan cards can be purchased.

- Franklin County Energy Department
  466 Main Street
  Greenfield, MA 01301
  Tel. (413) 772-6436

A source for possible leads to people in Franklin County who have experience conducting energy projects with youngsters.

- Hampden County Extension Service
  1499 Memorial Avenue
  West Springfield, MA 01089
  Tel. (413) 736-7204

Their Stretch America's Vanishing Energy (S.A.V.E.) program offers workshops on home energy conservation, "Dress For Warmth" posters, "Energy and Your Child" teaching packets, and a series of twenty management fact sheets.

- Hampshire County Planning Department
  99 Main Street
  Northampton, MA 01060
  Tel. (413) 584-7904

  Contact: George Boyle, Planning Director

A source of information on alternative energy sources, the department loans material from its resource library. CETA funding has enabled staff to offer slide/lecture presentations to schools and community organizations. Presentations are enhanced by the use of solar, wind, hydro, and methane energy models. They also plan to conduct public tours of sites in the county which use renewable sources of energy.

- Hitchcock Center for the Environment
  The Carriage House, Larch Hill
  525 South Pleasant Street
  Amherst, MA 01002
  Tel. (413) 256-6006

Hitchcock offers classroom programs and field trips for local school children; public workshops, forums, and field trips; teacher workshops; film programs; and exhibits. Many energy-related materials are available for use in their large resource library. Request a listing of their material.

- Massachusetts Bay Solar Energy Association
  55 Chester Street
  Newton, MA 02161
  Tel. (617) 965-5428

  Contact: Robert O. Smith

- Massachusetts Office of Energy Resources
  94 State Street
  Springfield, MA 01103
  Tel. (413) 739-9615

  Contact: Mary Bleckwehl

A variety of K-12 materials on energy education topics may be obtained from this office. Available items include: curriculum guides, integrated activities, resource lists of where to order low or no cost materials, and activity guides from the Department of Energy.

- Massachusetts Voice of Energy (MVOE)
  1032 Statler Office Building
  Boston, MA 02116
  Tel. (617) 542-2580

Professional engineers and college students represent MVOE as speakers on technical and socio-economic factors related to energy questions. Solar, fossil, wind, nuclear and other technologies are covered. They also sponsor a travelling energy simulator through which audiences see the depletion of energy sources and alternate choices now and one hundred years from now.

- Merrimack Education Center (MEC)
  101 Mill Road
  Chelmsford, MA 01824
  Tel. (617) 256-3985

MEC has developed a "Resource Guide to Energy Conservation and Solar Energy" which provides teachers with sources of information useful in developing school energy programs. They are also building a file on promising energy conservation practices in schools.

- Museum of Science
  Science Park
  Boston, MA 02114
  Tel. (617) 723-2500

The museum's education department offers several school programs related to energy. GET-UP-AND-GO, for grades 1-4 asks students to draw on their intuitive understanding of energy as a basis for discovering how light can be used to move a toy car, how steam can spin an engine, and how their own energy can turn on a light bulb. COMMOTION IN MOTION, for grades 5-12, takes the audience from the natural philosophy of Aristotle, through the dynamic observational experiments of Galileo of Newton, up to the provocative thought experiments of Einstein...and beyond. ENERGY: CRISIS AND CHALLENGE is a multi-media presentation highlighting the history of energy use and current attitudes. Two energy-related chemistry programs are: THE BURNING QUESTION for grades 5-9 which demonstrates what fire teaches us about atomic structure; and THE MOLECULES OF LIFE which explores the chemistry of living things.

- NACUL Environmental Design Center
  592 Main Street
  Amherst, MA 01002
  Tel. (413) 256-8025

Staff members will speak to students about their current projects involving ecological architecture, or students may visit their offices. Booklets, describing their projects, are sold at the center for a small fee.

- National Coal Association
  1130 17th Street, NW
  Washington, DC 20036
  Tel. (202) 628-4322

- National Solar Heating and Cooling Information Center
  P.O. Box 1607
  Rockville, MD 20850
  Tel. (800) 523-2929

A complete one-stop service facility for all information, detailed or general, on any aspect of solar heating and cooling. The center can put your community or business group in touch with appropriate speakers. It also maintains an up-to-date list of solar workshops, conferences, and meetings.

- New Alchemy Institute
  P.O. Box 47
  Woods Hole, MA 02543
  Tel. (617) 563-2655

One of the foremost centers for the research and development of appropriate technology in the country, New Alchemy operates working experimental aquaculture and agriculture systems and designs and tests solar and wind energy systems. The institute is open for tours by arrangement, and staff offer in-school presentations when possible.

- New England Coalition on Nuclear Pollution, Inc.
  P.O. Box 637
  Brattleboro, VT 05301
  Tel. (802) 257-0336

The coalition makes energy education programs and audio-visual materials available to schools and community organizations. They also maintain a resource library, assist with program planning, operate a mobile van, and provide a speakers bureau.

- New England Solar Energy Association
  P.O. Box 541
  22 High Street
  Brattleboro, VT 05301
  Tel. (802) 254-2386

The association operates a mail order bookstore; sponsors conferences, workshops, and seminars; and compiles slide sets of solar installations. Publishing activities include a bimonthly newsletter and an annual New England Yellow Pages of solar energy businesses. Membership includes a newsletter subscription and discounts on books and conference/workshop fees.

- Northeast Appropriate Technology Network, Inc.
  70 Federal Street
  Greenfield, MA 01301
  Tel. (413) 774-2257

This independent, non-profit energy organization fosters knowledge and application of appropriate technology on a local and regional basis. Several components of the network are described on the following page.

The FRANKLIN COUNTY ENERGY PROJECT published The Franklin County Energy Study: A Renewable Energy Future in the spring of 1979. This state-of-the-art report gives an overview of the county's current energy situation and prospects for replacing present energy sources with renewable sources. The report's findings are supported by statistical documentation. The project is presently conducting a commercial energy efficiency program. Contact: Mark Cherniack

NEW ROOTS FOR THE NORTHEAST is a bi-monthly magazine stressing self-reliance in the area of safe and appropriate technology. Available by subscription, the magazine provides access to new ideas, tools, and services which encourage self-reliance. $8.00 year/individual, $12.00 year/libraries. Contact: Mitch Anthony

THE VALLEY SOLAR CENTER is a renewable energy development assistance center. Specifically, the center offers information on implementing small-scale renewable energy systems. Their extensive library of books, periodicals, and newsletters is open to the public. Call to check on library hours. Contact: Stuart Perry

- Northeast Solar Energy Center
  470 Atlantic Avenue
  Boston, MA 02110
  Tel. (617) 292-9250

  Contact: Jerry Skapof

  In Western Massachusetts contact: Vincent King
  Tel. (413) 664-4501

Serving nine states in the Northeast region, this center distributes curriculum materials, conducts seminars, and offers technical assistance to schools developing curricula. They also conduct computer searches for bibliographies on specific topics catalogued within the United States Department of Energy's collections. Their library is open to the public.

- Northfield Mountain Recreation and Environmental Center
  RR 1, P.O. Box 377
  Northfield, MA 01360
  Tel. (413) 659-3713

The Northeast Utilities hydroelectric generating station is located on Northfield Mountain, and the reclaimed mountain has

been developed as an environmental center. School groups may visit the facility and the center. Special programs can be arranged.

- Nuclear Information and Resource Service
  1536 16th Street, NW
  Washington, DC 20036
  Tel. (800) 424-2477 (call between 1:00 and 5:00 p.m.)

- People for Safe Energy
  60 Myrtle Street, Apartment 8
  Boston, MA 02114
  Tel. (617) 227-7834

The members of PSE believe nuclear energy can be replaced by power from safe, clean, and renewable sources. They provide films, slide shows, speakers, and debates for school and community events on nuclear and alternative energy topics.

- The United States Department of Energy
  Washington, DC 20545

This department serves as a primary resource center for federal information, curriculum material, and funding for energy programs. See the other sections of this booklet for specific addresses from which to request material, or contact:

Educational Programs Branch
1000 Independence Avenue, SW
Washington, DC 20545
Tel. (202) 252-6480

Office of Public Affairs
1000 Independence Avenue, SW
Washington, DC 20545
Tel. (202) 252-5568

National Energy Information Center
1726 M Street, NW
Washington, DC 20545
Tel. (202) 634-5610

- Urban Solar Energy Association
  21 Burnside Avenue
  Somerville, MA 02144
  Tel. (617) 628-5558

Through its newsletter, public meetings, library, speakers, slide shows, and publications, this association makes available the latest information about low-cost solar and alternate energy measures. Individuals and commercial/industrial sites in the Boston area, can find information on costs, plans, performance data, and where to buy materials. A yearly membership of $3.00 entitles individuals to the newsletter, "Alternate Energy Buyers' Guide", and "Home Solar Assessment Survey". You can also participate in solar barnraising projects.

- Western Massachusetts Solar Energy Association
  Tillson Farm
  University of Massachusetts
  Amherst, MA 01003
  Tel. (413) 545-2132

The association is involved with community education and technical assistance to promote the use of solar energy.

- Wood Energy Institute
  P.O. Box 800
  Camden, ME 04843
  Tel. (207) 236-4841

- Worldwatch Institute
  1776 Massachusetts Avenue, NW
  Washington, DC 20036
  Tel. (202) 452-1999

Worldwatch encourages a reflective, deliberate approach to global problem solving. Results of research projects are published in books, papers, and articles. Some energy related topics include: "Energy for Development: Third World Options"; "The Other Energy Crisis: Firewood"; and the "Solar Energy Timetable".

Massachusetts Department of Education Regional Centers

Central Massachusetts Regional Center
Beaman Street, Route 140
West Boylston, Massachusetts 01583
617-835-6267

Greater Boston Regional Center
54 Rindge Avenue Extension
Cambridge, Massachusetts 02140
617-547-7472

Northeast Regional Center
219 North Street
North Reading, Massachusetts 01864
617-727-0600

Pittsfield Regional Center
188 South Street
Pittsfield, Massachusetts 01201
413-499-0745

Southeast Regional Center
P.O. Box 29
Lakeville, Massachusetts 02346
617-947-3240

Springfield Regional Center
155 Maple Street
Springfield, Massachusetts 01105
413-739-7271